

REMARKS**Remarks Directed to Election/Restrictions**

Applicant notes with appreciation the Examiner's reconsideration of the Restriction Requirement and subsequent modification thereof.

Remarks Directed to Rejection Under 35 U.S.C. §101

Claims 1, 2, 4, 6, 7, 9-33, 54 and 56 stand rejected under 35 U.S.C. §101 as directed to non-statutory subject matter since independent claims 1, 14, 22, 27, 33, 54 and 56 did not explicitly indicate that the nucleotide sequence claimed is a non-naturally occurring nucleotide sequence. Applicant has amended claims 1, 22, 54 and 56 to include the term "isolated" modifying the term "nucleic acid sequence" which the Examiner states would obviate the rejection as indicative that the claims do not encompass naturally occurring nucleic acid sequences. (August 11, 2004 Office Action, p.5: "Amending the claims to clearly limit the claims to isolated nucleic acid sequences such that the claims do not encompass naturally occurring nucleic acid sequences would obviate this rejection") Applicant submits that in light of these amendments the rejection is overcome and Applicant therefore respectfully requests withdrawal of this rejection of claims 1, 2, 4, 6, 7, 9-33, 54 and 56.

Remarks Directed to Rejection Under 35 U.S.C. §112, Second Paragraph

Claims 9, 11, 15-18, 23-26, 28-31, 54 and 56 stand rejected under 35 U.S.C. §112, second paragraph as being indefinite due to the use of the phrase "depicted as." Claims 9, 11, 15-18, 23-26, 28-31, 54 and 56 are hereby amended as suggested by the Examiner (August 11, 2004 Office Action, p.5) in order to clarify the claims. Applicant submits that the claims are definite as required under 35 U.S.C. §112, second paragraph and Applicant therefore respectfully requests withdrawal of this rejection of claims 9, 11, 15-18, 23-26, 28-31, 54 and 56.

Remarks Directed to Rejection Under 35 U.S.C. §112, First Paragraph

Claims 1, 2, 4, 6, 7, 13, 14, 19-22, 27, 32 and 33 stand rejected under 35 U.S.C. §112, first paragraph as failing to comply with the written description requirement. In particular the claims

are rejected because the specification “has not provided sufficient written description of the genus of molecules encompassed by the claims.” (August 11, 2004 Office Action, p.7)

Claim 1 is directed to “an isolated nucleotide sequence comprising a coding sequence for a full-length mutant microbial purine nucleoside phosphorylase having an amino acid substitution mutation, the mutant purine nucleoside phosphorylase having different biological activity than a wild type microbial purine nucleoside phosphorylase.” Applicant notes the numerous examples included in the specification of molecules described by this claim. In particular, the specification details 22 full-length mutant microbial purine nucleoside phosphorylases having an amino acid substitution mutation in Table I wherein each listed mutant purine nucleoside phosphorylase has different biological activity than a wild type microbial purine nucleoside phosphorylase cleaving enzyme. Tables II, III, IV and V further detail aspects of inventive mutants having different biological activity than a wild type purine nucleoside phosphorylase cleaving enzyme. Applicant submits that claims 1, 2, 4, 6, 7, 13, 14, 19-22, 27, 32 and 33 fully comply with the written description requirement and respectfully requests withdrawal of the current rejection of these claims under 35 U.S.C. §112, first paragraph.

Remarks Directed to Rejection Under 35 U.S.C. §102

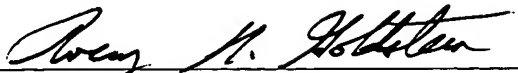
Claims 1, 2, 4, 7, 14, 20 and 22 stand rejected under 35 U.S.C. 102(b) as being anticipated by Maynes et al. (Biochem. J., 1999). A nucleotide sequence, vector or host cell according to the present invention includes a nucleotide sequence encoding a mutant microbial purine cleavage enzyme. Maynes et al. is cited as teaching a nucleotide sequence encoding a mutant purine cleavage enzyme that has different biological activity than the wild-type enzyme. (August 11, 2004 Office Action, p. 10) However, Maynes et al. do not appear to teach all elements detailed by the instant claims since no disclosure relating to a mutant microbial enzyme is apparent in the Maynes et al reference. Thus, Applicant submits that claims 1, 2, 4, 7, 14, 20 and 22 are not anticipated by Maynes et al. It is respectfully requested that this rejection be withdrawn.

Summary

By this amendment, claims 3-5, 8, 34-53 and 55 have been cancelled. Applicant reserves the right to pursue these claims in future. Claims 1, 2, 6-7, 9-33, 54 and 56 are pending. Each

claim is believed to be in proper form and directed to allowable and patentable subject matter.
Reconsideration and allowance of the claims is requested.

Respectfully submitted,

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